

WHAT IS CLAIMED IS:

1. A bulk bag for the storage and transport of bulk materials, comprising:

- 5       a bottom panel;  
          a plurality of side panels;  
          a pair of substantially parallel collapsible tubular guide members, each tubular guide member having a first end and a second end and being secured on or adjacent to  
10   the top of a side panel; and  
          a plurality of lifting straps;  
          each end of each tubular guide member supporting a lifting strap and the tubular members being connected together by a first spacer;
- 15       wherein the first spacer comprises at least one axially stiff elongate member and is provided with a pair of jaws at each end, each pair of jaws comprising a first jaw member and a second jaw member and being adjustable between an open position and a closed position and biased  
20   to the open position by spring means;  
          each pair of jaws being connected to a tubular member at or adjacent to the first end thereof in a manner whereby when the jaws are in the closed position they will cause at least the first end of each tubular member to lie  
25   substantially flat and when the jaws are in the open position they will cause or permit at least the first end of each of the tubular members to adopt a shape which is suitable for receiving a tine of a fork-lift.

- 30   2. A bag as claimed in claim 1, wherein the spacer comprises a pair of stiff elongate members connected together by a spring means, each end of one of the

elongate members comprising one of the said first jaw members and each end of the other elongate member comprising one of the said second jaw members.

5    3.    A bag as claimed in claim 2, wherein the elongate members of each spacer are hingedly connected together.

4.    A bag as claimed in claim 1, wherein each tubular member has a slot or cut-out portion adjacent each end for  
10    receiving a portion of one of the lifting straps and is provided with a strap-covering tab for each slot or cut-out portion, which is hingedly connected along an edge thereof.

15    5.    A bag as claimed in claim 4, wherein each strap-covering tab is integral with the tubular member and formed by cutting, and wherein each strap-covering tab is provided with a locking tab which is cut out from a region which spans the hinge connection and which locking tab can  
20    be tucked under a free edge of the cut-out portion to retain the strap-covering tab over the cut-out portion.

6.    A bag as claimed in claim 1, wherein the tubular guide members are connected together at or adjacent to  
25    their second ends by a second spacer.

7.    A bag as claimed in claim 1, wherein each of said lifting straps is integrated with one of said tubular guide members.

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8.    A bag as claimed in claim 1, wherein each of said tubular members is integrated with a top edge of a side

panel.

9. A bag as claimed in claim 1, wherein at least said  
first end of each tubular member is provided with a  
5 projecting lower lip which, when in use, will permit the  
tines of a fork-lift to engage with said lips by lowering  
said tines from above said tubular members.

10. A support device for securing to a bulk bag  
10 comprising a bottom panel, a plurality of side panels and  
a plurality of lifting straps, the device comprising a  
pair of substantially parallel collapsible tubular guide  
members each having a first end and a second end and which  
are connected together by a first spacer;

15 wherein the first spacer comprises at least one  
axially stiff elongate member and is provided with a pair  
of jaws at each end, each pair of jaws comprising a first  
jaw member and a second jaw member and being adjustable  
between an open position and a closed position and biased  
20 to the open position by spring means;

each pair of jaws being connected to a tubular member  
at or adjacent to the first end thereof in a manner  
whereby when the jaws are in the closed position they will  
cause at least the first end of each tubular member to lie  
25 substantially flat and when the jaws are in the open  
position they will cause or permit at least the first end  
of each of the tubular members to adopt a shape which is  
suitable for receiving a tine of a fork-lift.

30 11. A device as claimed in claim 10, wherein the first  
spacer comprises a pair of stiff elongate members  
connected together by a spring means, each end of one of

the elongate members comprising one of the said first jaw members and each end of the other elongate member comprising one of the said second jaw members.

5 12. A device as claimed in claim 11, wherein the elongate members of the first spacer are hingedly connected together.

13. A device as claimed in claim 11, wherein the elongate  
10 members are formed from a corrugated plastics material.

14. A device as claimed in claims 10, wherein the spring means comprises at least one coil spring.

15 15. A device as claimed in claim 13, wherein the spring means comprises at least one coil spring having free ends provided with barbs and wherein the or each spring is connected between the elongate members by engagement of the barbs in channels in the elongate members.

20 16. A device as claimed in claim 10, wherein the tubular members have a hexagonal cross section.

17. A device as claimed in claim 10, wherein the tubular  
25 members have an octagonal cross section.

18. A device as claimed in claim 10, wherein the tubular members are formed from a corrugated plastics material.

30 19. A device as claimed in claim 10, wherein the tubular members are securable to the side panels of a bulk bag by means of the lifting straps.

20. A device as claimed in claim 19, wherein each tubular member has a slot or cut-out portion adjacent the first and second ends for receiving a portion of a lifting strap of a bulk bag and is provided with a strap-covering tab  
5 for each slot or cut-out portion, which is hingedly connected along an edge thereof.

21. A device as claimed in claim 20, wherein each strap-  
10 covering tab is integral with the tubular member and formed by cutting, and wherein each strap-covering tab is provided with a locking tab which is cut out from a region which spans the hinge connection and which locking tab can be tucked under a free edge of the cut-out portion to  
15 retain the strap-covering tab over the cut-out portion.

22. A device as claimed in claim 10 wherein the tubular guide members are connected together at or adjacent to their second ends by a second spacer.

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23. A device as claimed in claims 10, wherein each tubular guide member comprises an outer tube and an inner tube which are connected together, the first spacer being connected to at least one of the inner tube and the outer  
25 tube of each guide member.

24. A device as claimed in claim 23, wherein a single fastening releasably connects a jaw member of the first spacer together with the inner tube and the outer tube.

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25. A device as claimed in claim 19, wherein at least one tubular member has a slot or cut-out portion adjacent at

least one of said first and second ends for receiving a portion of a lifting strap of a bulk bag and is provided with a strap-covering tab for said slot or cut-out portion, which is hingedly connected along an edge thereof;

wherein said strap-covering tab is provided with a an elastic loop for releasably holding said tab down when said elastic loop is disposed around said tubular member; and

wherein said tubular member has a chamfered or tapered portion extending upwardly in use from said end to said slot or cut-out portion.

26. A device as claimed in claim 10, wherein at least said first end of each tubular member is provided with a projecting lower lip which, when in use, will permit the tines of a fork-lift to engage with said lips by lowering said tines from above said tubular members.

27. A spacer for securing between substantially parallel tubular guide members on opposed top edges of a bulk bag, the spacer comprising at least one axially stiff elongate member and being provided with a pair of jaws at each end; each pair of jaws comprising a first jaw member and a second jaw member and being adjustable between an open position and a closed position and biased to the open position by spring means.

28. A spacer as claimed in claim 27, wherein the at least one elongate member comprises a pair of stiff elongate members connected together by a spring means, each end of one of the elongate members comprising one of the said

first jaw members and each end of the other elongate member comprising one of the said second jaw members.

29. A spacer as claimed in claim 28, wherein the elongate  
5 members are hingedly connected together.

30. A spacer as claimed in claim 28, wherein the elongate members are formed from a corrugated plastics material.

10 31. spacer as claimed in claim 27, wherein the spring means comprises at least one coil spring.

32. A spacer as claimed in claim 30 wherein the spring means comprises at least one coil spring having free ends  
15 provided with barbs and wherein the or each spring is connected between the elongate members by engagement of the barbs in channels in the elongate members.

33. A support device for securing to a bulk bag, the  
20 device comprising a pair of substantially parallel collapsible tubular guide members which are connected together at or adjacent to each end by spacers;

wherein each spacer comprises a pair of stiff elongate members connected together by a spring means;

25 each elongate member of each spacer being connected to each tubular member at a different location to that to which the other elongate member is connected;

whereby the support device will lie flat when under a suitable load but the spring means will cause the elongate  
30 members of each spacer to move apart relative to one another when the load is removed, thereby causing the tubular members to adopt a shape which is suitable for

receiving and guiding the tines of a fork-lift.

34. A bulk bag for the storage and transport of bulk materials, comprising:

- 5       a bottom panel;
- a plurality of side panels;
- a pair of substantially parallel collapsible tubular guide members, each tubular guide member having a first end and a second end and being secured on or adjacent to
- 10   the top of a side panel; and
- a plurality of lifting straps;
- each end of each tubular guide member supporting a lifting strap and the tubular members being connected together by a first spacer;
- 15       wherein at least said first end of each tubular member is provided with a projecting lower lip which, when in use, will permit the tines of a fork-lift to engage with said lips by lowering said tines from above said tubular members;
- 20       and wherein said first spacer comprises at least one axially stiff elongate member and is provided with a pair of jaws at each end, each pair of jaws comprising a first jaw member and a second jaw member and being adjustable between an open position and a closed position and biased
- 25   to the open position by spring means;
- each pair of jaws being connected to a tubular member at or adjacent to the first end thereof in a manner whereby when the jaws are in the closed position they will cause at least the first end of each tubular member to lie
- 30   substantially flat and when the jaws are in the open position they will cause or permit at least the first end of each of the tubular members to adopt a shape which is



suitable for receiving a tine of a fork-lift.

35. A support device for securing to a bulk bag, the device comprising:

5       a pair of substantially parallel collapsible tubular guide members which are connected together at or adjacent to each end by spacers;

          each tubular member being provided with a projecting lower lip which, when in use, will permit the tines of a fork-lift to engage with said lips by lowering said tines  
10       from above said tubular members;

          each spacer comprising a pair of stiff elongate members connected together by a spring means;

          each elongate member of each spacer being connected  
15       to each tubular member at a different location to that to which the other elongate member is connected;

          whereby the support device will lie flat when under a suitable load but the spring means will cause the elongate members of each spacer to move apart relative to one  
20       another when the load is removed, thereby causing the tubular members to adopt a shape which is suitable for receiving and guiding the tines of a fork-lift.